phosphates, etc., and not to pus. Many of the cases in class (1) are probably merely ones of pyelitis or pyelonephritis, in which pain is the rule, and these are to be sharply differentiated from class (2). These cases of slight suppuration are interesting, however, as generally the pain is not proportional to the amount of suppuration. It is probably due in these cases to the action of an intermittent congestion of a chronically inflamed kidney beneath a capsule which constricts it, or to the existence of a fibrous perinephritis which prevents free motion of the kidney in respiratory or abdominal movements. Generally, one or both of these conditions is found at operation. In the second category there is no marked infection, and the pain must, therefore, be considered more purely nephritic in origin. It may be dull and constant, or sharp and shooting in character, and in all cases reported by Rochet was limited to one side. He reports 10 cases of this condition in all, 3 of these falling in class (1), the others in class (2). In 2 of the latter, both occurring in young girls, an interesting condition was found, in that in each case urine from the affected side produced tuberculosis in guinea-pigs, and yet at operation, the kidney appeared perfectly normal. In both cases nephrotomy was performed, but no tuberculous lesions found. The surfaces of the kidney were in each case brought together by sutures; both patients made a good recovery, both have been entirely relieved of their pains, and neither has developed any signs of tuberculosis. One case has gone through a normal pregnancy, and has been under observation for three years since operation. The 3 cases falling in class (1) showed the presence of dense adhesions and thick, fibrous masses around the kidney. In the other 5 cases no definite cause for the pain could be found; in 1 no demonstrable renal or perirenal lesions were present; in 1, there was a slight sclerosis of the perirenal tissue; in 1 there was merely an interstitial nephritis, and in 2 the kidney was large, congested, the color of wine dregs, and showed subcapsular strangulation. The operations employed in the treatment of these 10 cases were as follows: "Decortication" (removal of fatty capsule), 2; decapsulation, 2; nephrotomy, 5; nephrectomy, 1. All cases were cured symptomatically, all but 1 having been followed from one to five years since operation. In nearly all cases albumin was present in the urine of the affected side before operation; since operation, this has in most of the cases persisted, but in decreased amount. It is suggestive that, of the 7 cases of the second class, 6 occurred in women of dicidedly neurotic tendency.

Use of Silver Wire in Nephrotomy.—The results of a series of experiments on dogs, in which nephrotomy was performed by the use of silver wire instead of the knife, are reported by DERGE and E. K. CULLEN (*Surg., Gyn., and Obstet.*, 1911, xiii, 365). Their technique, the various steps of which are illustrated by Brodel's incomparable drawings, is to pass a No. 3 or No. 4 silver wire, by means of a suitable needle, into the pelvic portion of the kidney, and then by a see-saw motion to gradually draw it out through the kidney substance to the surface, firm countertraction on the kidney being made by an assistant. In this way, the entire kidney, or as much of it as is desired, may be laid open, according to where the needle is introduced and brought out. Derge and Cullen claim that much less hemorrhage is caused by this method than by the use of the knife, since many of the branching vessels are rather pushed aside by the wire than cut through, the cut being made in the direction in which they slope by a smooth, yielding surface, whereas the sharp, hard edge of the knife, passing in the reverse direction, simply cuts through all vessels in its path. This claim is supported by two series of experiments, in one of which transverse, in the other longitudinal cuts were made in the kidneys. It was found by accurate measurement of the hemorrhage for a period of twenty seconds that in both series the ratio of the amount of hemorrhage in the wire-cut to that in the knife-cut cases was about 1 to 2. In the former the hemorrhage was almost entirely venous, with very rarely a small spurting vessel, and was easily controlled by mere approximation of the surfaces, or by hot gauze; in the latter, spurting vessels were often seen on the cut surface, and at times compression of the artery had to be resorted to to control the bleeding. One month after operation the dogs were killed, and the kidneys examined microscopically. It was found in all cases that the infarct, and consequent destruction of kidney substance, occurring after the knife operation was much larger than after the use of the wire. In conclusion, a series of cases are reported in which this method has been used on human subjects by Halsted, Kelly, and T. S. Cullen, with, on the whole, very favorable results so far as hemorrhage is concerned.

End Results of Nephrectomy in Renal Tuberculosis.—ISRAEL (*Folia Urologica*, 1911, vi, 257) presents his conclusions based upon the study of 1023 cases of nephrectomy for renal tuberculosis, 170 of these being cases of his own; the information concerning the others was obtained through personal communication with some twenty of the best-known European urologic surgeons. His most important conclusions drawn from this large material may be summarized as follows: There is no spontaneous cure of renal tuberculosis; tuberculin treatment does not cure it; the only thing that does cure it is early nephrectomy. The total mortality, *i. e.*, both "early" (within six months of operation) and "late," amounts to 25 per cent. of all cases operated on, so that three-fourths of the patients are saved by the operation. Nephrectomy in cases of unilateral tuberculosis prevents its development in the opposite kidney in most cases, but a healthy kidney will become infected from a tuberculous one which is not removed much more frequently than from any other focus. In bilateral kidney tuberculosis nephrectomy should be done only where there is severe destruction of one organ with only an incipient affection in the other, associated with frequent, severe hemorrhages, or intolerable pain. In cases of unilateral tuberculosis associated with Bright's disease, nephrectomy should be done only if the danger from the tuberculous kidney seems to be greater than that from the lack of secreting parenchyma. Toxic conditions of the opposite kidney, other than Bright's, generally clear up after a nephrectomy. In unilateral tuberculosis the bacilli disappear from the urine in three-fourths of all cases, this being determined by inoculation. They may persist, however, without producing symptoms for as long as seventeen